

ent monuments? What was the secret of their art? By what spirit were they moved? Absorbed in thought, I did not hear the beginning of the music, and then as a response to my reverie and arousing me from it, rang out the clear voice of the boy leading the antiphon; "that thy power, thy glory and mightiness of thy kingdom might be known unto men." Here was the answer. Moving in a world not realized, these men sought, however feebly, to express in glorious structures their conception of the beauty of holiness, and these works, our wonder, are but the outward and visible signs of the ideals which animated them. Practically to us in very different days life offers the same problems, but the conditions have changed, and, as happened before in the world's history, great material prosperity has weakened the influence of ideals, and blurred the eternal difference between means and end. Still, the ideal State, the ideal Life, the ideal Church—what they are and how best to realize them. Such dreams continue to haunt the minds of men, and who can doubt that their contemplation immensely fosters the upward progress of our race?

What we are doing here in our several ways is to build up on earth the city of God. Like the forgotten craftsmen who labored on the lotos columns of Karnak or carved the glorious doorways of Chartres we contribute in our humble fashion toward a mighty and a lasting end. The means are prosaic—report cards and spot maps, culture tubes and vaccines, clinics and nursing visits—and the results may appear only in a smaller decimal behind the death rate per thousand of the population. Yet the real fact behind it all is the saving of men, women and children from suffering and from death; and the building into the social machinery of mankind of a technic which shall yield the same beneficent results throughout the coming years.

LEGISLATION RELATING TO FRUIT AND VEGETABLE PRESERVATION*

THE SCOPE of the work logically lying within the sphere of this Committee is very wide. It is an almost virgin field. Innumerable problems in it relating to the public health remain unanswered and unstudied. Progress is slow, yet our knowledge is being augmented by research and experience at a greater rate than ever before.

It was felt that any contribution, however small, to our present store of knowledge of legislation pertaining to food preservation, would be of value and general interest to all public health workers.

Data were collected, therefore, from the health and agricultural departments of the states and territories of the United States as well as from the U. S. Public Health Service and U. S. Department of Agriculture, Bureaus of Chemistry, Plant

Industry and Home Economics. The information from the states was checked up and in some cases supplemented by information furnished by the federal bureaus or by reading the laws of the states themselves. Nearly complete data were obtained from 44 states, the territories of Hawaii and Porto Rico and the District of Columbia.

DIGEST OF DATA

Forty-seven states, Hawaii, Porto Rico and the District of Columbia have state or territorial food laws essentially similar to the United States Food and Drugs Act of 1906 with its later amendments.

One state (New Mexico) reported that it had no food laws.

In 23 states the enforcement of all food laws was carried out by the departments of agriculture.

In 20 states the enforcement was supervised by the departments of health.

In 3 states neither health nor agriculture departments, but specially elected or appointed food commissioners (Oregon, Wisconsin and

* Report of the Committee on Fruits, Vegetables and Their Products, presented to the Food and Drugs Section of the American Public Health Association at the Fifty-fifth Annual Meeting at Buffalo, N. Y., October 12, 1926.

Missouri), have this in charge. Two states made no report.

Excluding sanitary laws, 36 out of 46 states and territories investigated have no important amendments or additions to the Federal Food and Drugs Act.

Ten states have laws showing changes which may have public health bearing. These for the most part relate to cold storage, fruit and vegetable grading laws and certain phases of food adulteration or misbranding.

Aside from the Food and Drugs Act and sanitary laws, 22 states out of 46 investigated possess regulations controlling some phase of fruit or vegetable preservation.

These 22 refer to the following phases of fruit and vegetable preservation:

CLASS OF LEGISLATION	STATES
Harvesting	2
Transportation	7
Handling	14
Storage	18
Preservation by canning or pasteurizing	18
Preservation by cold storage	17
Preservation by fermentation	5
Preservation by use of sugar, salt, or other chemicals	9

The states particularly active in regulating food factories are California, Wisconsin, Minnesota, Maine, Ohio, and possibly Colorado, Utah and Montana.

The information obtained relative to specific regulations for cold storage, canning, transportation, etc., was in many cases very general but it is believed that on the whole it is fairly reliable. The laws were personally looked up in order to check or supplement the records of 22 states.

There were 41 states or territories possessing so-called sanitary laws out of a total of 46 investigated. By means of these laws it is possible for the states to enforce cleanliness in food manufacturing plants. States possessing no sanitary laws are Arkansas, Arizona, New Mexico, Washington, and West Virginia.

In 21 states the sanitary laws were enforced by health departments while in 15 enforcement was by the state agricultural departments, 4 by both health and agriculture and one by a special food commissioner.

Replies were obtained from 45 states in answer to the question of cannery inspection.

Thirty-seven states make at least an annual inspection of food manufacturing plants such as canneries.

Eight states make no inspections. In Maine full-time cannery inspection is optional by the packer who must pay its cost. A similar

though compulsory inspection is in force in Minnesota and California.

As to the frequency of cannery inspection, the following data were collected: 3 states inspect daily (California, Maine, and Minnesota); 6 states inspect frequently, that is oftener than once a month (Wisconsin, Oregon, Utah, Michigan, Ohio, and Hawaii); 17 states inspect occasionally, at least twice a year; and 11 inspect once a year or on complaint only.

Fourteen states of the 45 investigated require food handlers or cannery workers to undergo a periodic medical examination, while 3 additional ones require such an examination in the case of complaint or emergency.

Of these 17 states or territories only 2, Porto Rico and Hawaii, fully enforce them, 8 others only in case of emergency or complaint, while 7 make little or no effort to enforce them. Limited personnel and funds was given as the main reason for non-enforcement.

Only 9 states or territories from a total of 45 now license food canneries. These are Iowa, Wisconsin, Louisiana, Montana, Ohio, Porto Rico, California, and Maine. Legislation is now pending in Colorado.

REPLIES TO QUESTIONNAIRE

In answer to the question "Do you think the licensing of canneries or food manufacturing plants is a desirable procedure?" 41 states submitted replies; 27 thought it was desirable, 11 did not, while 4 were doubtful. A number of comments were made, such as, "If conditions cannot be controlled without licenses they cannot be controlled with them," and "It would be desirable if the plants were frequently inspected." Several states claimed it would "simplify the enforcement of sanitary and other laws."

Thirty-eight states answered the question, "Do you think it desirable that the use of certain minimal processing or cooking temperatures for vegetable canning be a prerequisite to the granting of a state cannery license?" Thirty thought it was desirable; 4 considered it undesirable; while 4 were doubtful. Several answers commented that such requirements were difficult of enforcement, others claimed it was entirely practical.

Similarly, in regard to the question of compulsory code marks on all canned fruits, vegetables, and their products, a total of 41 replies were received. Thirty-seven states stated that code marks should be compulsory, 2 replied negatively, while 2 were doubtful. One addi-

tional state considered coding desirable but stated it should not be made compulsory. Thus we have a very overwhelming majority in favor of codes. Four states specified that plain English was better than code, especially the date on which the food was packed. Two states claimed daily production records were likewise very desirable.

Thirty-nine replies were received in answer to the question, "Is it feasible to compel canneries to install temperature recording devices, such as are used in milk pasteurizing plants, and file the records thus made?" There were 28 affirmative answers (8 qualified), 3 negative (1 qualified), and 8 doubtful ones. Three comments were to the effect that it was too difficult of enforcement; 2 thought it was practical only if frequent cannery inspections could be made. Two states stated it impractical except for large factories.

REPORTABLE FOOD POISONING DISEASES

It was attempted to collect information from the state departments of health on what diseases of the food poisoning group were reportable. Due to obsolete classifications in some states several general terms or synonyms are placed in the list which includes food poisoning: "ptomaine" poisoning, botulism, enteritis, bacillary dysentery, and paratyphoid B. All 48 states are included.

Food poisoning is a reportable disease in 9 states, *i.e.*, Georgia, Kansas, Maryland, Montana, New Mexico, Washington, Wyoming, and West Virginia. Any poisoning is reportable in Oklahoma.

"Ptomaine" poisoning is also listed as reportable in 5 states.

Botulism is now a reportable disease in 13 states, *i.e.*, Colorado, Connecticut, Arizona, Idaho, Kansas, Maryland, New York, Minnesota, Oregon, Washington, California, West Virginia, and Wyoming. It is interesting to observe that those states having had most outbreaks of botulism are those where the disease has been made a reportable one. Needless to say it should be made reportable in every state and territory.

Paratyphoid fever (undifferentiated into types except in Washington) is reportable in 37 states and territories.

Bacillary dysentery is reportable in 33 states but in some it is not differentiated from the amoebic type.

Enteritis is reportable in 42 states.

Statistics on all food poisoning type of dis-

eases are, in general, very incomplete and probably unreliable. The information in possession of the Surgeon General, U. S. Public Health Service, is very fragmentary.

PREVALENCE OF FOOD POISONING

It was attempted to collect statistics upon the prevalence of these diseases. The data are presented, not with the idea that they are accurate or complete but on the basis that they are the best that could be obtained. Even the U. S. Public Health Service has no data on this subject.

In 1925 there were reported in the United States 42 cases of enteritis, 1,236 cases of paratyphoid B besides 1,232 cases of undifferentiated paratyphoid, and 11,517 cases of bacillary dysentery. That these reports are incomplete is probable. Efforts should be made in every state to clear up the haze surrounding the reporting of these food poisoning diseases.

The following data compiled largely by Geiger for the *Journal of the American Medical Association* (1926), on botulism may prove of interest:

HUMAN BOTULISM IN THE UNITED STATES SINCE 1920

Year	No. of Outbreaks	No. of Cases	Deaths
1920.....	14	48	33
1921.....	14	56	22
1922.....	21	55	46
1923.....	12	21	16
1924.....	8	43	29
1925.....	8	21	15

Some of the late cases have been distributed as follows: Colorado 5, Connecticut 1, New York 1, Idaho 1, Minnesota 3, Wyoming 2, Ohio 3, California 2, and Kansas 1.

The distribution seems to be very wide, and as usual home canned vegetables caused most of the outbreaks. The general presence of *Cl. botulinum* in soil over the greater part of the United States hangs as a veritable sword of Damocles over every careless or ignorant home and commercial canner in the country. A number of federal, state and private laboratories are working on food poisoning as related to the food preservation industries and it is hoped that before long, enough experimental work coupled with practical experience will have been accumulated to enable state health departments, as well as canners themselves, to carry out the necessary precautions to guard the public health. Some states have already paved the way.

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